



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,322	11/22/2000	Mark W. Minne	10007268-1	3126

22879 7590 06/17/2004

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

MOE, AUNG SOE

ART UNIT	PAPER NUMBER
----------	--------------

2612

5

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,322

Applicant(s)

MINNE ET AL.

Examiner

Aung S. Moe

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In page 9, line 21, the phrase "external interface 100" should be changed to - - external interface 90 - -.

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. In this case, claim 9 recites the limitations ""the camera back memory assembly is removable from the front portion", and page 7, lines 5+ of the disclosure stated that "Figure 3 illustrates removable portion 50 being removed from a front portion 52 to access a non-volatile memory 54 of the digital camera 20". However, Figure 3 does not show "**a front portion 52**" as recited in the specification and as required by the claim 9.

Therefore, the limitations recited in claim 9, such as "the camera back memory assembly is removable from the front portion" must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional

Art Unit: 2612

replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 22, and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong '355(U.S. 2003/0058355 A1).

Regarding claim 22, Wong '355 discloses a method of using a one-time-use camera (i.e., see paragraph 0069) comprising:

defining a digital camera (i.e., Figs. 8-10, see paragraph 0004+ and 0069+) including a camera housing (i.e., the digital camera body 201), an electronic digital camera system (i.e., noted the digital camera system as shown in Figs. 8-10) for generating digital image data representative of a captured image (i.e., noted that the digital camera system 200 is capable of generating digital image data captured by the digital camera); and

a non-volatile memory including a write one memory matrix component (i.e., noted from Figs. 3 and 5 that the non-volatile memory array, such as a flash EEPROM, contain rows and columns of memory cells, thus, they are considered as a matrix memory component; see paragraphs 0039+ and 0048+) in communication with the electronic digital camera system (i.e., noted the digital camera system 200) for storing the digital image data (i.e., as discussed in paragraphs 0039+ and 0048, the non-volatile memory 300/500 is capable of storing either an analog or multi-bit digital image data in the memory cell);

capturing an image using the digital camera (200) and storing the image as digital image data in the non-volatile memory (i.e., as discussed in paragraphs 0039+ and 0048, the non-volatile memory 300/500 is capable of storing either an analog or multi-bit digital value in the memory cell); removing the non-volatile memory (i.e., noted from Figs. 8-10, the non-volatile memory assembly portion 810/902 is removable from the camera body 201; see paragraphs 0069+); and transferring the digital image data from the non-volatile memory to a portable medium (i.e., as disclosed in paragraphs 0039+ and 0048, the non-volatile memory 300/500 is capable of storing either an analog or digital image data in the memory cells, and Wong '355 further show in Figs. 8-10 the use of A/D converter 120 to transfer the digital image data to the external device, such as the printer 272/261 and the removable flash memory card 285, to generate a portable medium).

Regarding claim 24, Wong '355 discloses the portable medium as photographic prints (i.e., noted the use of printers 272 and 261 as shown in Figs. 8-10).

Regarding claim 25, Wong '355 discloses the portable medium as a digital video disk (i.e., noted the Flash Memory Card 285 as shown in Figs. 8-10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-21, 23, 26-27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (U.S. 2003/0058355 A1) in view of Gudesen et al. (U.S. 6,055,180).

Regarding claim 1, Wong '355 discloses a one-time-use camera (i.e., see paragraph 0069) comprising: an electronic digital camera system (i.e., the system as shown in Figs. 2 & 8-10) for generating digital image data representative of a captured image (i.e., Figs. 8-10, see paragraph 0004+ and 0069+);

a non-volatile memory (i.e., noted the non-volatile memory as shown in Fig. 3; see paragraphs 0038-0039 and 0067+) in communication with the electronic digital camera system (i.e., the noted the camera system 200/201) for storing the digital image data (i.e., see paragraphs 0039 and 0067+), the non-volatile memory comprising a matrix memory component (i.e., noted from Figs. 3 and 5 that the non-volatile memory array contain rows and columns of memory cells, thus, they are considered as a matrix memory component; see paragraph 0039); and wherein supplying an electric energy to the functional medium (i.e., noted that the non-volatile memory array 300/500, such as a flash EEPROM, include an addressable cell in the functional medium of the memory cells; see paragraphs 0039+ and Figs. 3 and 5) of the cell detects or changes the logic state of the cell, for reading and writing the digital image data at the matrix memory component (i.e., Noted the read/write pipeline 310-1/510-1 to 310-N/510-N for the matrix memory component 300/500 as discussed in paragraphs 0041+ and 0052).

Furthermore, it is noted that although Wong '355 shows the use of the non-volatile memory comprising an addressable memory cell (i.e., Figs. 3 and 5), and further suggested that other memory architectures are also suitable for the digital camera system (i.e., see paragraph 0039), Wong '355 does not explicitly show the non-volatile memory comprising a first layer of parallel conductors, a second layer of parallel conductors oriented mutually orthogonal to the first set of parallel conductors, and a functional medium disposed between the first layer and the second layer, wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention.

However, the above-mentioned claimed limitations are well-known in the art as evidenced by Gudesen '180. In particular, Gudesen '180 teaches that it is conventionally well known to use a non-volatile memory (i.e., see Fig. 1; col. 1, lines 40+) comprising a first layer of parallel conductors (m1-mx), a second layer of parallel conductors (n1-ny) oriented mutually orthogonal to the first set of parallel conductors (m1-mx), and a functional medium (Fig. 2, the element 1) disposed between the first layer (mk) and the second layer (nl), wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention (i.e., col. 7, lines 5+ and col. 8, lines 26+) for the purpose of reducing complexity, cost and power consumption thereof (i.e., see col. 4, lines 5+).

In view of the above, having the system of Wong '355 and then given the well-established teaching of Gudesen '180, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong '355 as taught by Gudesen '180, since Gudesen '180 states at col. 4, lines 5+ that such a modification would reduce complexity, cost and power consumption thereof.

Regarding claim 2, the combination of Wong '355 and Gudesen '180 discloses wherein the functional medium (i.e., Fig. 2 of Gudesen '180) is made of an organic material with non-linear impedance characteristics (i.e., see the Abstract of Gudesen '180).

Regarding claim 3, the combination of Wong '355 and Gudesen '180 discloses wherein the functional medium includes a polymer material (i.e., see col. 5, lines 19+ of Gudesen '180).

Art Unit: 2612

Regarding claim 4, the combination of Wong '355 and Gudesen '180 discloses wherein the functional medium includes an amorphous silicon material (i.e., see col. 5, lines 35+ of Gudesen '180).

Regarding claim 5, the combination of Wong '355 and Gudesen '180 discloses wherein the functional medium includes a low molecular weight organic material (i.e., Figs. 2, 3, 6 & 8; col. 5, lines 65+, col. 8, lines 60+, col. 9, lines 55+ of Gudesen '180).

Regarding claim 6, the combination of Wong '355 and Gudesen '180 discloses an external interface (i.e., Figs. 8-10, the elements 265, 901 of Wong '355) wherein the external interface is configured for transfer of the digital image data to an external device (i.e., Figs. 8-10, the elements 901, 271, 270 and 285 of Wong '355).

Regarding claim 7, the combination of Wong '355 and Gudesen '180 discloses a camera housing (i.e., noted the camera body 201 as shown in Figs. 8-10; see paragraphs 0069+ of Wong '355).

Regarding claim 8, the combination of Wong '355 and Gudesen '180 discloses wherein the housing (i.e., the camera body 201 of Wong '355) includes a front portion and a back portion (i.e., noted that the camera body 201 has a front portion for capturing the image/audio and a back portion for attaching the camera back memory assembly 810/902 as shown in Figs. 8-10), wherein the non-volatile memory component is attached to the back portion defining a camera back memory assembly (noted that the camera back assembly 810/902 of Wong '355 contains the non-volatile memory as shown in Figs. 3 and 5; see Figs. 8-10 of Wong '355).

Regarding claim 9, the combination of Wong '355 and Gudesen '180 discloses wherein the camera back memory assembly is removable from the front portion (i.e., noted that the

Art Unit: 2612

camera back memory assembly 810/902 of Wong '355 can be removed from the front portion of the camera system; see Figs. 8-10 and paragraphs 0069+).

Regarding claim 10, the combination of Wong '355 and Gudesen '180 discloses wherein the camera back assembly is replaceable with a second camera back assembly (i.e., it is noted that the camera back assembly 810/902 as shown in Figs. 8-10 of Wong '355 is removable from the camera body 201, thus, it is obvious that the camera back assembly 810/902 can be replaced with the different camera back assembly 810/902, e.g., the second camera back assembly as claimed, so that it would allow the digital camera system of Wong '355 to store more image data therein).

Regarding claim 11, the combination of Wong '355 and Gudesen '180 discloses wherein the non-volatile memory component is removable from the camera (i.e., see paragraph 0069 of Wong '355).

Regarding claim 12, the combination of Wong '355 and Gudesen '180 does not explicitly stated the replacement of the non-volatile memory component with a second non-volatile memory, however, this is considered obvious from the teaching of Wong '355. In particular, Wong '355 discloses that the non-volatile memory component (i.e., the elements 810/902 as shown in Figs. 8-10 of Wong '355) is removable from the camera body (i.e., the element 201 of Wong '355) so that camera can be used as disposable (i.e., see paragraph 0069). In view of this it is clearly obvious that when the non-volatile memory component (810/902) is either full or remove from the camera body (210), then the non-volatile memory (810/902) has to be replaced with the second non-volatile memory component in the camera to allow the camera to be reused, and this would allow the user to captured additional images as desired. In view of this, it would

Art Unit: 2612

have been obvious to one having ordinary skill in the art at the time the invention was made to provide the camera with a second non-volatile memory to replace the first non-volatile memory for allowing the user to captured additional images as desired.

Regarding claim 13, the combination of Wong '355 and Gudesen '180 discloses wherein the memory component (i.e., the elements 810/902 of Wong '355) includes an external device interface (i.e., see Figs. 9/10; the elements 265 of Wong '355) for transferring the digital image data to an external device (i.e., see Figs. 9/10; the elements 901, 271, 270 and 285 of Wong '355).

Regarding claim 14, the combination of Wong '355 and Gudesen '180 discloses wherein the electronic digital camera system (i.e., Figs. 2 & 8-10 of Wong '355) includes a lens system, a shutter system, a charge coupled device (paragraph 0033 of Wong '355), an analog to digital converter (i.e., the element 120 of Wong '355), a digital signal processor (i.e., the element 130 of Wong '355), and a camera system processor for receiving an image and converting the image to digital image data (i.e., the elements 120, 130, 265 and 901 of Wong '355) stored in the memory component (i.e., the elements 210, 275 and 285 of Wong '355).

Regarding claim 15, the combination of Wong '355 and Gudesen '180 discloses wherein the electronic digital camera system (i.e., Figs. 2 & 8-10 of Wong '355) includes an external device interface (i.e., see Figs. 9/10; the elements 265 of Wong '355) for transferring the digital image data stored at the memory component to an external device (i.e., the elements 210, 275 and 285 of Wong '355).

Regarding claim 16, Wong '355 discloses a one-time-use camera (i.e., see paragraph 0069) comprising: an electronic digital camera system (i.e., the system as shown in Figs. 2 & 8-

10) for generating digital image data representative of a captured image (i.e., Figs. 8-10, see paragraph 0004+ and 0069+), the electronic digital camera system including a mode switch for allowing a user to select a mode of operation of the camera (i.e., as discussed in paragraph 0032 and 0070 of Wong '355, the camera system 200 may be operate in a burst mode, video image mode, and still image mode, thus, a mode switch must be included in the camera system of Wong '355 for allowing the camera's user to select a specific mode of operation of the camera);

a non-volatile memory (i.e., noted the non-volatile memory as shown in Fig. 3; see paragraphs 0038-0039 and 0067+) in communication with the electronic digital camera system (i.e., the noted the camera system 200/201) for storing the digital image data (i.e., see paragraphs 0039 and 0067+), the non-volatile memory comprising a matrix memory component (i.e., noted from Figs. 3 and 5 that the non-volatile memory array contain rows and columns of memory cells, thus, they are considered as a matrix memory component; see paragraph 0039); and wherein supplying an electric energy to the functional medium (i.e., noted that the non-volatile memory array 300/500, such as a flash EEPROM, include an addressable cell in the functional medium of the memory cells; see paragraphs 0039+ and Figs. 3 and 5) of the cell detects or changes the logic state of the cell, for reading and writing the digital image data at the matrix memory component (i.e., Noted the read/write pipeline 310-1/510-1 to 310-N/510-N for the matrix memory component 300/500 as discussed in paragraphs 0041+ and 0052).

Furthermore, it is noted that although Wong '355 shows the use of the non-volatile memory comprising an addressable memory cell (i.e., Figs. 3 and 5), and further suggested that other memory architectures are also suitable for the digital camera system (i.e., see paragraph 0039), Wong '355 does not explicitly show the non-volatile memory comprising a first layer of

Art Unit: 2612

parallel conductors, a second layer of parallel conductors oriented mutually orthogonal to the first set of parallel conductors, and a functional medium disposed between the first layer and the second layer, wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention.

However, the above-mentioned claimed limitations are well-known in the art as evidenced by Gudesen '180. In particular, Gudesen '180 teaches that it is conventionally well known to use a non-volatile memory (i.e., see Fig. 1; col. 1, lines 40+) comprising a first layer of parallel conductors (m1-mx), a second layer of parallel conductors (n1-ny) oriented mutually orthogonal to the first set of parallel conductors (m1-mx), and a functional medium (Fig. 2, the element 1) disposed between the first layer (mk) and the second layer (nl), wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention (i.e., col. 7, lines 5+ and col. 8, lines 26+) for the purpose of reducing complexity, cost and power consumption thereof (i.e., see col. 4, lines 5+).

In view of the above, having the system of Wong '355 and then given the well-established teaching of Gudesen '180, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong '355 as taught by Gudesen '180, since Gudesen '180 states at col. 4, lines 5+ that such a modification would reduce complexity, cost and power consumption thereof.

Regarding claim 17, the combination of Wong '355 and Gudesen '180 discloses wherein the electronic digital camera system includes a microphone system for recording sound as a part

of the digital image data (i.e., noted the use of microphone input 206 as shown in Figs. 2 & 8-10 of Wong '355 for recording sound as a part of the digital image data for the digital camera system 200).

Regarding claim 18, the combination of Wong '355 and Gudesen '180 discloses including a selectable mode of operation for recording a still picture as the digital image data (i.e., as discussed in paragraph 0032 and 0070 of Wong '355, the digital camera system 200 may be operate in a burst mode, video image mode, and still image mode, thus, a mode switch must be included in the digital camera system of Wong '355 for allowing the camera's user to select a specific mode, such as a still picture mode, for capturing the digital image data for digital still camera; see paragraph 0064 of Wong '355).

Regarding claim 19, the combination of Wong '355 and Gudesen '180 discloses a selectable mode of operation for recording still picture and sound associated with the still picture as the digital camera (i.e., with the use of a microphone 206 as shown in Figs. 2 and 8-10, the digital still camera of Wong '355 is capable of recording audio data associated the still picture as the digital image data; see paragraphs 0035+ and 0064+ of Wong '355).

Regarding claim 20, the combination of Wong '355 and Gudesen '180 discloses including a selectable mode of operation for recording video as the digital image data (i.e., the digital camera system 200 of Wong '355 is capable of recording video images, as well as still images, thus, the digital camera system of Wong '355 must include a selectable mode as claimed; se paragraph 0064+ and 0070+ of Wong '355).

Regarding claim 21, the combination of Wong '355 and Gudesen '180 discloses including a selectable mode of operation for recording video and sound associated with the video

Art Unit: 2612

as the digital image data (i.e., the digital camera system 200 of Wong '355 is capable of recording video images, as well as still images, thus, the digital camera system of Wong '355 must include a selectable mode as claimed; see paragraph 0064+ and 0070+ of Wong '355).

Regarding claim 23, it is noted that although Wong '355 shows the use of the write once memory matrix (i.e., non-volatile memory as discussed in claims 1 and 16 above) comprising an addressable memory cell (i.e., Figs. 3 and 5), and further suggested that other memory architectures are also suitable for the digital camera system (i.e., see paragraph 0039), Wong '355 does not explicitly show the non-volatile memory comprising a first layer of parallel conductors, a second layer of parallel conductors oriented mutually orthogonal to the first set of parallel conductors, and a functional medium disposed between the first layer and the second layer, wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention.

However, the above-mentioned claimed limitations are well-known in the art as evidenced by Gudesen '180. In particular, Gudesen '180 teaches that it is conventionally well known to use a non-volatile memory (i.e., see Fig. 1; col. 1, lines 40+) comprising a first layer of parallel conductors ($m1-mx$), a second layer of parallel conductors ($n1-ny$) oriented mutually orthogonal to the first set of parallel conductors ($m1-mx$), and a functional medium (Fig. 2, the element 1) disposed between the first layer (mk) and the second layer (nl), wherein an addressable cell in the functional medium is defined at an intersection of each first layer parallel conductor and second layer parallel conductor as recited in present claimed invention (i.e., col. 7,

Art Unit: 2612

lines 5+ and col. 8, lines 26+) for the purpose of reducing complexity, cost and power consumption thereof (i.e., see col. 4, lines 5+).

In view of the above, having the system of Wong '355 and then given the well-established teaching of Gudesen '180, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong '355 as taught by Gudesen '180, since Gudesen '180 states at col. 4, lines 5+ that such a modification would reduce complexity, cost and power consumption thereof.

Regarding claim 26, please see the Examiner's comments with respect to claim 12 as discussed above.

Regarding claim 27, although Wong '355 discloses that the digital camera includes a second portion (810/902) of the housing having the non-volatile memory (201), which is attached to the digital camera housing portion (201), the combination of Wong '355 and Gudesen '180 does not explicitly state the replacement of the second portion of the housing having the non-volatile memory component with a third housing portion having a second non-volatile memory, however, this is considered obvious from the teaching of Wong '355. In particular, Wong '355 discloses that the second portion (810/902) of the camera housing having the non-volatile memory component (i.e., the elements 810/902 & 210 as shown in Figs. 8-10 of Wong '355) is removable from the camera body (i.e., the element 201 of Wong '355) so that camera can be used as disposable (i.e., see paragraph 0069). In view of this it is clearly obvious that when the non-volatile memory component (810/902) of the second portion of the housing is either full or remove from the camera body (210), then the second portion of the camera housing having the non-volatile memory (210) has to be replaced with the third housing portion having

Art Unit: 2612

the second non-volatile memory component (i.e., the new memory card 810/902) in the digital camera system to allow the camera to be reused, and this would allow the user to captured additional images as desired. In view of this, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the camera with a second non-volatile memory to replace the first non-volatile memory for allowing the user to captured additional images as desired.

Regarding claim 29, please see the Examiner's comments with respect to claim 2 as discussed above.

Regarding claim 30, please see the Examiner's comments with respect to claim 4 as discussed above.

Regarding claim 31, please see the Examiner's comments with respect to claim 3 as discussed above.

Regarding claim 32, please see the Examiner's comments with respect to claim 5 as discussed above.

7. Claim 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Wong '355 in view of Baum (U.S. 2002/0065741 A1).

Regarding claim 28, it is noted that Wong '355 does not explicitly show the step of sending the portable medium to a user as recited in present claimed invention.

However, the above-mentioned claimed limitations are considered obvious because Wong '355 suggests that the digital image data from the digital camera (200) can be transferred to the external devices (i.e., noted the elements 271, 270, 275, 285 and 901 as shown in Figs. 2 & 8-10

Art Unit: 2612

of Wong '355) for generating the portable medium (i.e., the noted the digital image can be printed on the digital printer 272/261 or transferred to smaller removable flash memory card 285; see paragraph 0067), thus, it is clearly obvious that the portable medium, such as a digital prints or the small removable flash memory card, can be send back to the camera user as claimed.

Furthermore, Baum '741 teaches that at the time of the invention was made it is well known to transfer the digital image data from the digital camera to a portable medium (i.e., see paragraph 0004 of Baum '741) so that the portable medium can be send back to the user (i.e., noted that the digital image data form the digital camera 108 can be transferred to the CD-ROM, diskette, or other removable storage medium to send back to the user; see paragraphs 0004 and 0069 of Baum '741).

In view of the above, having the system of Wong '355 and then given the well-established teaching of Baum '741, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong '355 as taught by Baum '741, since Baum '741 states at paragraphs 0014 that such a modification would allow interested users to view the images and selectively order reprints for one or more recipients when the portable medium is received by the camera's user.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Steinberg '325, Nakamura '768, Smith '468, Schrock '228, Nagasaki '930 and d'Alayer de Costemore d'Arc '351 shown a digital camera system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung S. Moe whose telephone number is 703-306-3021. The examiner can normally be reached on Mon-Fri (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Aung S. Moe
Primary Examiner
Art Unit 2612

A. Moe
June 10, 2004